

Supplementary Table 2. Full gene content of Metagenomic Islands detected by recruitment of selected virulence plasmids from enteric bacteria against the gut metagenome.

PLASMIDS	Start-End (bp)	Length (kbp)	Number of ORFs	Main features (number of genes)	
<i>Escherichia coli</i> E24377A plasmid pETEC_35	7893-11662	3.8	1	Conjugal transfer mating pair stabilization protein TraG.	
	20410-25193	1.7	4	Protein stbB, plasmid segregation protein ParM, hypothetical protein (2).	
	26190-28154	2	2	Hypothetical protein (2)	
	30914-31839	0.9	1	Hypothetical protein	
	32009-33237	1.2	1	Type-F conjugative transfer system pilin acetylase TraX	
<i>Escherichia coli</i> E24377A plasmid pETEC_73	8008-11232	3.2	2	Stable plasmid inheritance protein, plasmid segregation protein ParM.	
	13750-16212	2.5	1	Hypothetical protein	
	20504-24114	3.6	3	Hypothetical protein, AraC family transcriptional regulator, IS186 transposase.	
	25124-26985	1.9	1	AraC family transcriptional regulator	
	30107-36352	6.2	4	Fimbrial protein, fimbrial usher protein, hypothetical protein (2).	
	38174-38683	0.5	1	Hypothetical protein	
	40877-41739	0.8	3 (overlapping)	Hypothetical protein (3)	
	42663-43652	0.9	1	Replication initiation protein	
	44305-45616	1.3	0	Not annotated	
	46134-50395	4.3	3	Hypothetical protein, PilL protein (outer membrane lipoprotein), PilM protein (inner membrane protein). (Components of the pilin transport apparatus and thin-pilus basal body)	
	<i>Escherichia coli</i> E24377A plasmid pETEC_74	1838-2595	0.8	1	IS1294 transposase truncation
		3101-6084	3	3	IS66 family orf1, 2 and transposase
		6825-8563	1.7	3	IS91 transposase truncation (2), IS91 orf2.
15635-18183		2.5	2	IS21 family transposition helper protein, IS21 family transposase.	
26267-27233		1	0	Nothing annotated	
36654-41560		4.9	4	Hypothetical protein, IS66 family transposase, IS66 family orf 1 and 2	
43942-46420		2.5	3	IS66 family transposase, IS66 family orf 1 & 2	
47949-51799		2.9	1 (parcial)	Secreted serine peptidase EatA	
54192-55795		1.6	1	EAL domain-containing protein	
66782-69352		2.6	7	IS66 family orf2, IS66 family element, hypothetical protein (2), type IV conjugative transfer system pilin TraA, conjugal transfer pilus assembly protein TraL, conjugal transfer pilus assembly protein TraE	
<i>Escherichia coli</i> E24377A plasmid pETEC_80	0-4061	4	3	Hypothetical protein (3)	
	6954-9769	2.8	2	Plasmid segregation protein ParM, hypothetical protein.	
	10564-11701	1.1	1	IS3 family transposase	
	16314-18529	2.2	2	ISSd1 transposase, heat-labile enterotoxin A	
	28259-29461	1.2	3	Hypothetical protein (3)	

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	42046-43642	1.6	2	ParA protein, putative 60kDa chaperonin
	48647-53360	4.7	1	Periplasmic pilus chaperone CS3-1
	53966-55474	1.5	1	IS91 orf2
	56403-59240	2.8	2	IS91 orf2, AraC family transcription regulator
	60102-63660	3.6	3	Putative efflux ABC transporter permease protein, hypothetical protein (2).
	69973-71318	1.3	1	Hypothetical protein
	72739-74305	1.6	2	IS3 transposase orfA, IS91 orf2
	74977-79237	4.2	1	Hypothetical protein.
<i>Shigella flexneri</i> 2a plasmid pCP301	937-3098	2.1	2	OspB protein secreted by the Mxi-Spa secretion machinery of unknown function, PhoN2 (Apy) periplasmic phosphatase apyrase ATP diphosphohydrolase.
	3345-5289	1.9	1	OspC4
	5827-6942	1.1	2	IS600 Orf2 (2)
	7331-10381	3	2	Hypothetical protein (ospD2), OspF.
	10976-12301	1.3	2	Putative IS1 orf, hypothetical protein.
	17214-21768	4.5	4	Putative transposase, hypothetical protein (2), OspD1, secreted by the Mxi-Spa secretion machinery, function unknown.
	28145-29840	1.7	3	Plasmid segregation protein, hypothetical protein, putative transposase
	33662-35319	1.7	3	IS150 orfb, IS1294 transposase (2).
	36119-37666	1.5	2	Is100 ORF2, transcriptional activator VirF.
	39418-42882	3.5	1	Invasion plasmid antigen.
	44241-49514	5.3	8	IS600 ORF (2), hypothetical protein (4), IS1294 transposase, ISSf11 ORF2.
	56068-59597	3.5	6	Extracellular serine protease SepA, IS1294 transposase (2), IS630 orf, ISSf11 ORF (2).
	61287-66054	4.8	3	Iso-IS1 ORF2, invasion plasmid antigen (2).
	66641-71548	4.9	5	IS629ORF2, IS100 ORF1, invasion plasmid product, hypothetical protein, iso-IS10R ORF.
	72326-74542	3.2	3	IS629 ORF (2), transposase/IS protein.
	75019-81884	6.9	4	Iso-IS10R ORF, IS1294 transposase, hypothetical protein, OspC1 secreted by the Mxi-Spa secretion machinery, function unknown.
	82165-84136	2	5	Hypothetical protein (2), putative IS91 ORF2, ISSf11 ORF (2),
	90839-98072	7.2	7	Hypothetical protein, IS600 ORF (2), ISSf14 ORF (3), OspC3.
	102451-126782	24.3	25	Acp, putative acyl carrier protein, AraC-like family protein MxiE, hypothetical protein (3), IcsB invasion protein, IpaB & IpaC secreted by the Mxi-Spa secretion machinery required for entry into epithelial cells, IpaJ invasion plasmid antigen, IpgA, IpgB1 secreted by the Mxi-Spa machinery function unknown, IpgC cytoplasmic chaperone for IpaB and IpaC, IpgE cytoplasmic chaperone for IpgD, IpgF periplasmic protein similarities to the catalytic site of lysozymes, Mxi-Spa secretion

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				machinery protein, MxiG, MxiH component of the Mxi-Spa secretion machinery, MxiI component of the Mxi-Spa secretion machinery, MxiJ lipoprotein component of the Mxi-Spa secretion machinery, MxiK putative component of the Mxi-Spa secretion machinery, MxiL/M/N secreted by and putative component of the Mxi-Spa secretion machinery, outermembrane protein MxiD transcriptional activator VirB.
	129578-139352	9.8	14	ATP synthase SpaL, hypothetical protein, IS1294 transposase (2), IS600 ORF (3), Spa components of the Mxi-Spa secretion machinery (5), surface presentation of antigens protein Spa (2).
	139926-144074	4.1	6	Hypothetical protein (4), IS629 ORF (2).
	144514-146272	1.8	2	IS91 ORF (2).
	147810-153530	5.7	2	Hypothetical protein, VirA secreted by the Mxi-Spa secretion machinery function unknown.
	159998-163019	3	5	ISSf11 ORF (2), hypothetical protein, plasmid stable inheritance protein (2).
	167751-170456	2.7	3	ISSf14 ORF (3)
	175894-177367	1.5	3	Hypothetical protein (2), IS100 ORF.
	181073-183119	2	1	Invasion plasmid antigen secreted by the Mxi-Spa secretion machinery.
	188292-191410	3.1	2	IS3 ORF, hypothetical protein.
	195630-197563	1.9	1	IS630 orf
	211736-216287	4.6	5	Hypothetical protein, invasion plasmid antigen secreted by the Mxi-Spa secretion machinery, IS1294 transposase, OspE1, putative transposase.
<i>Escherichia coli</i> O157H7 Sakai str. Plasmid	15764-16630	0.8	1	Hemolysin C
	17513-18193	0.7	½	Hemolysin A
	18984-19522	0.5	½	Hemolysin A
	22987-24001	1	2	Hemolysin D PapX protein
	26744-28243	1.7	2	Hypothetical protein, KfrAs
	34595-35315	0.7	0	
	35665-36025	0.4	0	
	53881-54873	1	1	Hypothetical protein
	55930-65830	9.9	2	Toxin B, transposase Tra5.
	74298-74954	0.7	2	Hypothetical protein (2)
	79088-79552	0.5	1	Hypothetical protein
	81698-82863	1.2	1	Serine protease EspP
	85474-86980	1.5	0	
	92149-2919	0.6	1	ToxR-regulated lipoprotein